

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): A catalyst used for steam reforming of ~~methanol; comprising~~
methanol, comprising:

Al alloy particles [[each]] having an oxide surface layer containing fine copper oxide particles, the Al alloy particles being produced by a process comprising the step of

pulverizing a bulky Al alloy having a quasicrystalline phase or a related crystalline phase thereof, the quasicrystalline phase being represented by the formula: $Al_{100-y-z}Cu_yTM_z$, where y is in the range of 10 to 30 atomic percent, z is in the range of 5 to 20 atomic percent, and TM indicates at least one of transition metals other than Cu,

performing leaching treatment for Al alloy particles with an aqueous alkaline solution ~~which are prepared by pulverizing a bulky Al alloy having a quasicrystalline phase or a related crystalline phase thereof, the quasicrystalline phase being represented by the formula: $Al_{100-y-z}Cu_yTM_z$ (where y is in the range of 10 to 30 atomic percent, z is in the range of 5 to 20 atomic percent, and TM indicates at least one of transition metals other than Cu), wherein the oxide surface layer containing fine copper oxide particles is formed by adjusting~~ leaching conditions of the leaching treatment are adjusted so as to form an oxide surface layer, which contains dispersed fine Cu particles and which is composed of an Al oxide and a transition metal oxide, on the surface of each of the Al alloy particles, ~~followed by~~ and

performing a heat treatment of the leached Al alloy particles in an oxidizing atmosphere, whereby some or all of the fine Cu particles contained in the oxide surface layer are converted into the fine copper oxide particles.

2. (Currently amended): The catalyst ~~used for steam reforming of methanol~~, according to Claim 1, wherein the fine copper oxide particles in the ~~surface oxide~~ oxide surface layer obtained by the heat treatment ~~[[in an]]~~ in the oxidizing atmosphere ~~after the leaching treatment is CuO~~ comprise CuO or a $\text{Cu}(\text{TM}_x\text{Al}_{1-x})_2\text{O}_4$ ($0 < x \leq 1.0$) spinel compound, where $0 < x \leq 1.0$.

3. (Currently amended): The catalyst ~~used for steam reforming of methanol~~, according to Claim 1 or 2, wherein, in the surface oxide layer obtained by the heat treatment in an oxidizing atmosphere after the leaching treatment, an integrated layer composed of a Cu oxide and a transition metal (TM) oxide is formed in the vicinity of the interface with each of the Al alloy particles.

4. (Currently amended): The catalyst ~~used for steam reforming of methanol~~, according to Claim 1 or 2, wherein the TM is at least one element selected from the group consisting of Fe, Ru, Os, Co, Rh, and Ir.

5. (Currently amended): The catalyst ~~used for steam reforming of methanol~~, according to Claim 1 or 2, wherein the TM is at least one element selected from the group consisting of Mn,

Re, Cr, Mo, W, V, Nb, and Ta.

6. (Cancelled).

7. (Currently amended): A method for manufacturing a catalyst used for steam reforming of methanol: comprising the steps of

pulverizing a bulky Al alloy having a quasicrystalline phase or a related crystalline phase thereof, the quasicrystalline phase being represented by the formula: $Al_{100-y-z}Cu_yTM_z$ ~~(where,~~
where y is in the range of 10 to 30 atomic percent, z is in the range of 5 to 20 atomic percent, and TM indicates at least one of transition metals other ~~than Cu~~); than Cu, thereby obtaining Al alloy particles; and

performing leaching treatment for the Al alloy particles ~~formed in the pulverizing step~~ with an aqueous alkaline solution, wherein leaching conditions of the leaching treatment are adjusted to form oxide surface layers, which contain fine Cu particles dispersed therein and which are composed of an Al oxide and a transition metal oxide, on surfaces of the Al alloy particles, ~~followed by;~~ and

performing heat treatment of the leached Al alloy particles in an oxidizing atmosphere so that some or all of the fine Cu particles are converted into fine copper oxide particles, whereby the catalyst used for steam reforming of methanol is manufactured so as to have Al alloy particles provided with oxide surface layers containing the fine copper oxide particles.

8. (Currently amended): The method for manufacturing a catalyst ~~used for steam reforming of methanol~~, according to Claim 7, wherein the copper oxide in the surface oxide layers obtained by the heat treatment in an oxidizing atmosphere after the leaching treatment is CuO or a $\text{Cu}(\text{TM}_x\text{Al}_{1-x})_2\text{O}_4$ ($0 < x \leq 1.0$) spinel compound, where $0 < x \leq 1.0$.

9. (Currently amended): The method for manufacturing a catalyst ~~used for steam reforming of methanol~~, according to Claim 7, wherein the temperature of the aqueous alkaline solution is in the range of 40 to 90°C.

10. (Currently amended): The method for manufacturing a catalyst ~~used for steam reforming of methanol~~, according to Claim 7, wherein the aqueous alkaline solution is an aqueous solution containing one of sodium hydroxide (NaOH), sodium carbonate (Na_2CO_3), and sodium hydrogen carbonate (NaHCO_3), the concentration thereof being in the range of 2 to 15 percent by weight.

11. (Currently amended): The method for manufacturing a catalyst ~~used for steam reforming of methanol~~, according to Claim 7, wherein an amount leached out of the Al alloy particles by the leaching treatment using the aqueous alkaline solution is in the range of 0.5 to 40 percent by weight.

12. (Cancelled).